E-filed: 1/5/08

IN THE UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

SAN JOSE DIVISION

HYNIX SEMICONDUCTOR INC., HYNIX SEMICONDUCTOR AMERICA INC., HYNIX SEMICONDUCTOR U.K. LTD., and HYNIX SEMICONDUCTOR DEUTSCHLAND GmbH,

Plaintiffs,

v.

RAMBUS INC.,

Defendant.

No. CV-00-20905 RMW

ORDER DENYING RAMBUS'S MOTION FOR SUMMARY JUDGMENT NO. 1 ON MONOPOLIZATION AND GRANTING IN PART AND DENYING IN PART RAMBUS'S *DAUBERT* MOTION NO. 1

[Re Docket Nos. 2623 and 2668]

RAMBUS INC., Plaintiff, v. HYNIX SEMICONDUCTOR INC., HYNIX SEMICONDUCTOR AMERICA INC., HYNIX SEMICONDUCTOR MANUFACTURING AMERICA INC., SAMSUNG ELECTRONICS CO., LTD., SAMSUNG ELECTRONICS AMERICA, INC., SAMSUNG SEMICONDUCTOR, INC., SAMSUNG AUSTIN SEMICONDUCTOR, L.P., NANYA TECHNOLOGY CORPORATION, NANYA TECHNOLOGY CORPORATION U.S.A., Defendants.	No. C-05-00334 RMW **[Re Docket Nos. 540 and 571]**
RAMBUS INC., Plaintiff, v. SAMSUNG ELECTRONICS CO., LTD., SAMSUNG ELECTRONICS AMERICA, INC., SAMSUNG SEMICONDUCTOR, INC., SAMSUNG AUSTIN SEMICONDUCTOR, L.P., Defendants.	No. C-05-02298 RMW **[Re Docket Nos. 387 and 413]**
RAMBUS INC., Plaintiff, v. MICRON TECHNOLOGY, INC., and MICRON SEMICONDUCTOR PRODUCTS, INC. Defendants.	No. C-06-00244 RMW **[Re Docket Nos. 229 and 255]**

This order addresses two motions brought by Rambus related to the Manufacturers'[1] antitrust claims. Rambus's Summary Judgment No. 1 seeks summary judgment on the Manufacturers' monopolization and attempted monopolization claims. Rambus's *Daubert* Motion No. 1 requests that certain testimony of Dr. Gilbert be excluded from trial. The Manufacturers jointly oppose the motions. The court has reviewed the papers and considered the arguments of counsel. For the reasons set forth below, the court denies Rambus's Motion for Summary Judgment Number 1 on Monopolization. The court grants in part and denies in part Rambus's *Daubert* Motion No. 1 to exclude the opinions of Dr. Richard Gilbert.

I. MARKET DEFINITION

Rambus's motion for summary judgment challenges the Manufacturers' ability to define a market for their claims of monopolization or attempted monopolization under Section 2 of the Sherman Act, 15 U.S.C. § 2. A violation of Section 2 requires proof of a relevant product market and geographic market. *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 459 (1993); *Unitherm Food Systems, Inc. v. Swift-Eckrich, Inc.*, 375 F.3d 1341, 1363 (Fed. Cir. 2004) (reversing an antitrust verdict because no evidence supported the plaintiff's technology market definition), *rev'd on other grounds*, 546 U.S. 394 (2006). The Supreme Court requires this showing because it can be difficult to distinguish "robust competition" from anticompetitive conduct. *Id.* at 458-59. The market definition requirement guards against overuse of Section 2 in ways that chill competition. *Id.* at 459. While Rambus's motion raises a number of questions about the Manufacturers' contentions, the motion is narrow. Its argument is that the Manufacturers cannot define a relevant technology market as a matter of law, because the Manufacturers have no evidence of whether use of the alleged substitute technologies comprising the various technology markets require royalties to be paid. As discussed below, this failure to present evidence on royalties is relevant, but not fatal, to the Manufacturers' attempts to define technology markets.

A. The Relevant Market Contentions

[1] For purposes of this order, the court collectively refers to all of the Micron, Nanya, and Hynix entities as "the Manufacturers."

The Manufacturers' pleadings accuse Rambus of monopolizing a variety of markets. Micron's counterclaims accuse Rambus of monopolizing three alternative sets of technology markets:

> The relevant markets negatively affected by Rambus's anticompetitive misconduct are the markets for interface technologies for high performance DRAMs (either generally or for computer main memory). The Federal Trade Commission ("FTC") in *In the Matter of Rambus Inc.*, Federal Trade Commission Docket No. 9302, found that four such markets had been affected by Rambus's misconduct: (1) the market for latency technology; (2) the market for burst length technology; (3) the market for data acceleration technology; and (4) the market for clock synchronization technology. A fifth market exists for precharge technologies and was negatively affected by Rambus's misconduct, as the FTC found in its *Opinion on Remedy*.
>
> As an alternative to these markets, another relevant market negatively affected by Rambus's anticompetitive misconduct can be defined as the market for interface technologies for high–performance DRAMs (either generally or for computer main memory).
>
> As another alternative, the relevant markets are the technology markets that are compliant with the adopted standards.

Micron's First Amended Answer and Counterclaims, C-06-00244 RMW, Docket No. 87, at ¶ 103 (N.D. Cal. May 30, 2007) (line breaks added).

Nanya's pleadings define the relevant market as the four technology markets considered in the FTC's opinion. Nanya's First Amended Answer . . . And Counterclaims, C-05-00334 RMW, Docket No. 253, at ¶ 193 (N.D. Cal. July 10, 2007). As alternative or additional markets, Nanya alleges that Rambus has monopolized "the worldwide relevant market for interface technologies for high performance DRAMs and the worldwide relevant market or markets for interface technology for JEDEC-compliant DRAMs." *Id.* at ¶ 194.

Hynix's pleadings differ from Micron and Nanya's by alleging that Rambus has monopolized product markets, in addition to technology markets. Hynix alleged that the relevant markets are: "the market for synchronous DRAM interface technology; the market for synchronous DRAMs; and the market for Logic Chips." Hynix's Answer to Rambus's Reply, C-05-00334 RMW, Docket No. 289, at ¶ 171 (N.D. Cal. July 30, 2007).

The day after Hynix filed its answer, Dr. Richard Gilbert, the Manufacturers' jointly retained economics expert, filed his report. Dr. Gilbert identifies six specific technology markets that he concludes Rambus has monopolized: latency technology, burst length technology, data acceleration

technology, clock synchronization technology, precharge technology, and write latency technology. *See* Luedtke Decl., Ex. A, at ¶ 60 (hereinafter "Gilbert report"). Despite Hynix's allegations that Rambus monopolizes the markets for DRAM and logic chips, Dr. Gilbert does not identify any relevant product markets. Dr. Gilbert also does not attest to any of the more general technology market allegations made in the Manufacturers' pleadings.

After summarizing the Manufacturers' various pleadings, Rambus's motion for summary judgment addresses Dr. Gilbert's report and these market definitions. In their opposition, the Manufacturers do not contest that these six technology markets identified by Dr. Gilbert now comprise their theory of the case.

B. Defining Technology Markets

Traditional antitrust theory focuses on product or goods markets. *See* U.S. Dept. of Justice & Fed. Trade Comm'n, HORIZONTAL MERGER GUIDELINES § 1.1 (1992, rev. 1997) (hereinafter "MERGER GUIDELINES"); *see, e.g., Rebel Oil Co., Inc. v. Atl. Richfield Co.*, 51 F.3d 1421, 1437 (9th Cir. 1995) (considering market definition for retail gasoline markets).[2] It does not appear that the Manufacturers currently contend that Rambus has monopolized product markets. Instead, the Manufacturers allege that Rambus has monopolized or attempted to monopolize various technology markets, which "consist of [] intellectual property that is licensed." *See* U.S. Dept. of Justice & Fed. Trade Comm'n, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY § 3.2.2 (1995) (hereinafter "IP GUIDELINES"). Defining a technology market, as opposed to a product market, makes sense where "rights to intellectual property are marketed separately from the products in which they are used." *Id.*

While the possibility of applying antitrust law to markets for intellectual property rights has existed for decades, *see SCM Corp. v. Xerox Corp.*, 645 F.2d 1195 (2d Cir. 1981), the court is not

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[2] If appealed, this case will be argued before the Federal Circuit. *See* 28 U.S.C. § 1295. As discussed in prior orders, Federal Circuit law governs whether a use of a patent constitutes anticompetitive conduct. Regional circuit law, however, controls questions of "relevant market, market power, damages, etc., as those issues are not unique to patent law." *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 1068 (Fed. Cir. 1998) (en banc in relevant part). Therefore, where it is applicable, the court applies Ninth Circuit law.

aware of any case setting forth a methodology for defining a technology market. However, the DOJ/FTC Guidelines suggest that to delineate a relevant technology market, one must identify "the smallest group of technologies and goods over which a hypothetical monopolist of those technologies and goods likely would exercise market power---for example, by imposing a small but significant and nontransitory price increase." IP GUIDELINES, § 3.2.2.[3] This approach is "conceptually analogous" to that used to define product markets under the agencies' merger guidelines. *Id.*; *see also* Michael L. Katz & Howard A. Shelanski, *Mergers and Innovation*, 74 Antitrust L.J. 1, 39 (2007) (noting that "technology markets are---in the end---just product markets") (hereinafter "Katz & Shelanski").

"There is a long-standing principle by which economists define the scope of a product market: two goods or services are in the same relevant market if and only if consumers view them as sufficiently close substitutes." Katz & Shelanski, 74 Antitrust L.J. at 31. Under the Horizontal Merger Guidelines, this traditional product market definition of close economic substitutability is developed by an iterative process. *See* MERGER GUIDELINES § 1.1. First, one considers the narrowly defined product (or technology) and asks "what would happen if a hypothetical monopolist of that product imposed at least a 'small but significant and nontransitory' increase in price, but the terms of sale of all other products remained constant." *Id.* If the hypothetical monopolist would not find this profitable (because consumers of the product or technology substitute away),[4] one should consider the next-best substitute for the product (or technology) and add it to the group of products (or technologies). *Id.* Then, the test should be repeated "until a group of products is identified such that a hypothetical monopolist over that group of products would profitably impose at least a 'small

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[3] The Guidelines' methodology is "the most authoritative statement of technology market analysis to date." *See* Joshua A. Newberg, *Antitrust for the Economy of Ideas: The Logic of Technology Markets,* 14 Harv. J. L. & Tech. 83. 100 (2000) (hereinafter "Newberg").

[4] "In considering the likely reaction of buyers to a price increase, the Agency will take into account all relevant evidence, including, but not limited to, the following: (1) evidence that buyers have shifted or have considered shifting purchases between products in response to relative changes in price or other competitive variables; (2) evidence that sellers base business decisions on the prospect of buyer substitution between products in response to relative changes in price or other competitive variables; (3) the influence of downstream competition faced by buyers in their output markets; and (4) the timing and costs of switching products." MERGER GUIDELINES § 1.1.

but significant and nontransitory' increase." *Id.* This final group of products (or technologies) is the relevant market under the traditional market definition process.

In the context of technology markets, the DOJ and FTC recognize that data on technology licensing is less likely to be available or quantifiable because licensing terms are often secret or because licenses are granted in exchange for a cross-license, not a sum of money. IP GUIDELINES, § 3.2.2. The lack of such financial data is not fatal to a technology market definition. On the contrary, where such data cannot be obtained, the agencies recommend defining a technology market by including "other technologies and goods which buyers would substitute at a cost comparable to that of using the licensed technology" if the hypothetical monopolist attempted to raise the price of its technology. *Id.* For example, the IP Guidelines illustrate the technology market definition process using Alpha and Beta, two pharmaceutical process developers. *Id.*, example 2. The two firms have invented competing methods for manufacturing an unpatented drug. To evaluate a possible joint venture between Alpha and Beta, the Guidelines suggest that the agencies would examine a technology market comprised of manufacturing processes that make the drug. Such a market would include "other technologies that can be used to make the drug with levels of effectiveness and cost per dose comparable to that of the technologies owned by Alpha and Beta." *Id.*[5] The Guidelines do not explicitly require knowing the royalty rates of the other technologies to determine whether the technologies are substitutes (though "cost per dose" in example 2 could include a running royalty). Instead of requiring royalty calculations, the Guidelines acknowledge that such information may not exist. In those situations, a technology market can still be defined by determining what other technologies a buyer could switch to if necessary.

To be sure, the inquiry is always focused on the economic substitutability of the two technologies, not just whether the technologies accomplish a similar function. *See Unitherm*, 375

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[5] In this example, the agencies would also consider what effect competing drugs would have on Alpha and Beta's ability to charge royalties on its processes. This caveat recognizes that downstream competition between two end-products (A and B) could prevent an upstream supplier of inputs for A from imposing a price increase because otherwise consumers would exclusively purchase B. This consideration does not apply to the markets in this case because there do not appear to be any substitutes for DRAMs in making electronics.

F.3d at 1364. But while royalty rates inform the question of economic substitutability, determining royalty rates is not the goal of this inquiry. The goal is always to determine whether consumers would actually substitute between various technologies. This basket of substitute technologies comprises the relevant technology market.

Finally, a flexible approach to defining technology markets accords with economic research on technology markets. Commentators have recognized that creating a "bright-line" market definition in innovative sectors of the economy is often difficult and can be counterproductive. Katz & Shelanski, 74 Antitrust L.J. at 33-34 (criticizing market definition requirement where proof of anticompetitive harm exists). Others have noted that "[m]arket definition is least useful when market shares would not be strongly probative of market power or anticompetitive effect, while direct evidence as to market power or anticompetitive effect is available and convincing." Jonathan B. Baker, *Market Definition: An Analytical Overview*, 74 Antitrust L. J. 129, 131 (2007). As discussed below, market share is not a particularly meaningful measure of market power in technology markets affected by standard-setting. In situations where monopoly power can be established by evidence other than market share, some authority suggests that market definition is not a required element of an antitrust claim. *See, e.g., FTC v. Indiana Fed'n of Dentists*, 476 U.S. 447, 460-61 (1986); *Re/Max Int'l v. Realty One, Inc.*, 173 F.3d 995, 1018-19 (6th Cir. 1999) (collecting and discussing cases allowing direct evidence of harm to substitute for structural market analysis). However, the court does not reach the issue of whether the Manufacturers must establish a market in this case because it is not necessary to do so to resolve this motion for summary judgment.

C. The Alleged Technology Markets

For each of the six technology markets, Dr. Gilbert identifies Rambus's patented technology and various substitute technologies that he states comprise the relevant technology market. Rambus challenges Dr. Gilbert's market definitions, arguing that Gilbert did not consider the costs of each substitute technology and perform the iterative test laid out in the Merger Guidelines. Mot. *In Limine* at 5-6; reply at 3-4. The Manufacturers respond that Dr. Gilbert has correctly defined the

markets by relying on the expert reports of Joseph McAlexander and Dr. Christopher McArdle. Opp. at 9.

Dr. Gilbert's report on relevant markets begins by stating that:

> I have assumed for the sake of my analysis that for each of the Rambus technologies there existed close substitutes at the time JEDEC was considering inclusion of the technology in JEDEC standards. Furthermore, I assume that each of the Rambus technologies and its close substitutes enable a function (such as latency) for which there are no other close substitutes. As a result, a reasonable relevant market definition consists of six relevant technology markets corresponding to the six Rambus technologies, and the technologies that were close substitutes for each, for use in high-speed DRAMs.

Gilbert report, ¶ 60. Rambus contends that Dr. Gilbert cannot "assume" that there exist close substitutes; instead, Rambus argues that Dr. Gilbert must have performed the traditional iterative process for determining whether two technologies are close enough substitutes that they comprise a single technology market.

Dr. Gilbert's report later identifies a formula for determining whether two technologies are substitutes. Gilbert report, ¶ 70. A technology has two characteristics to a consumer: its value (v) and its associated royalty (r). *Id.* A consumer values two technologies equally if:

$$v1 - r1 = v2 - r2$$

Id. While Dr. Gilbert uses this formula to develop his testimony regarding Rambus's market power, he does not use it in defining relevant technology markets.

I. Latency Technology

Dr. Gilbert's report first considers the market for latency technology. Gilbert report, ¶ 60(a). The JEDEC SDRAM standards "incorporate a latency technology known as programmable column strobe ('CAS') latency." *Id.* Dr. Gilbert defines the latency technology market as also including: "fixed CAS latency, setting latency with one or more fuses, setting latency by antifusing, identifying CAS latency with pin voltage, and using an asynchronous DRAM design." *Id.* (citing Brewer Decl., Ex. 7 at 21-27 (hereinafter "McAlexander report")). Dr. Gilbert understands that these alternatives are "close substitutes" for programmable CAS latency, and hence collectively form a market for

latency technology.[6] *Id.*

Dr. Gilbert's report does not contain any information on the costs of these various technologies. The McAlexander report that Dr. Gilbert cites generally states that "[e]ach of the viable alternatives mentioned below would have been a reasonable consideration at that time, either alone or in combination, when assessed in view of the cost, feasibility, performance, and acceptability to JC-42.3 subcommittee members." McAlexander report at 17. The McAlexander report similarly lacks any specifics on the costs of alternative technologies.

In opposing Rambus's *Daubert* motion to prevent Dr. Gilbert from testifying on market definition, the Manufacturers argue that Dr. Gilbert also relied on the report of Dr. Christopher McArdle. Dr. Gilbert's report on market definition does not cite McArdle's reports. Nonetheless, Dr. McArdle's reports do contain differential cost estimates for various alternative latency technologies. *See* Brewer Decl. Ex. 2a, at 23-28 (hereinafter "McArdle report II"); Brewer Decl. Ex. 2b, at 21 (hereinafter "McArdle report III").

Rambus argues that the Manufacturers' failure to produce any evidence on the royalty rates of the alternative technologies prevents the Manufacturers from defining a technology market, as a matter of law. Rambus notes that Dr. Gilbert's report recognizes that one must know a technology's royalty rate to determine if a consumer will value it equally to another technology. As discussed above, courts must not be so rigorous in defining technology markets that they render the antitrust laws meaningless. The Guidelines explicitly recognize that royalty information, while helpful, will not always be available. Where it is not available, the plaintiffs (here, the Manufacturers) must still demonstrate that the two technologies are "close substitutes" such that consumers would switch from one to the other. However, they may demonstrate the economic substitutability of the technologies by evidence that does not include royalty rates. The Manufacturers have introduced some evidence that there is a relevant technology market for latency technologies. Accordingly, there is a genuine

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[6] As a preliminary matter, it is worth noting that the only alternatives to programmable CAS latency are fixed CAS latency or developing an asynchronous DRAM design. *See* McAlexander report, at 21-27. The various technologies listed by Dr. Gilbert – setting latency with one or more fuses, setting latency by antifusing, or identifying CAS latency with pin voltage – are all methods of achieving fixed CAS latency. *Id.* at 23-26.

issue of material fact as to market definition and summary judgment cannot be entered as to latency technology.

ii. Burst Length Technology

Dr. Gilbert next considers the market for burst length technology. *See* Gilbert report ¶ 60(b). The JEDEC standards use a programmable burst length technology. *Id.* Dr. Gilbert lists the following alternatives which he argues comprise the market: "fixed burst length, setting burst length with fuses, setting burst length with a dedicated pin, controlling burst length with a burst terminate signal, and using an asynchronous DRAM design." *Id.* (citing McAlexander report at 29-31).[7] Dr. Gilbert's report does not recite any data on the cost of these technology alternatives; neither does McAlexander. Dr. McArdle's reports, however, contain cost estimates for various alternative burst length technologies. *See* McArdle report II, at 28-29; McArdle report III, at 21. Accordingly, there is some evidence to support a burst length technology market thus precluding the entry of summary judgment.

iii. Data Acceleration Technology

Dr. Gilbert's proposed market for data acceleration technology includes the JEDEC-standard dual-edge clocking and the alternative technologies of single-edge clocking with double clock frequency and IBM's toggle mode. Gilbert report ¶ 60(c) (citing McAlexander report, at 34-35). McAlexander identifies two alternative technologies: single edge clocking and IBM's asynchronous toggle mode. McAlexander report, at 33-34. Neither report discusses the costs of implementing these technologies. The McArdle reports do estimate the costs of dual-edge clocking alternatives, though it is not clear that McArdle estimates the costs of the same features that McAlexander proposes as alternatives. *See* McArdle report II, at 21-22; McArdle report III, at 20. Nonetheless, Rambus's motion for summary judgment is narrowly focused on the Manufacturers' failure to demonstrate the royalty rates of these alternative technologies. As knowledge of the royalty rate is not an absolute requirement for defining a technology market, Rambus's motion fails as to data

[7] Setting burst length with fuses, setting burst length with a dedicated pin, and controlling burst length with a burst terminate signal are all methods of fixing burst length; they are not alternatives to fixing burst length. *See* McAlexander report at 28-30.

acceleration technology.

iv. Clock Synchronization Technology

Dr. Gilbert identifies a technology market comprised of the JEDEC standard on-chip PLL/DLL, as well as "not using a PLL or DLL (either by relying on a single edge of a faster clock, by relying on a strobe, or simply by eliminating the PLL/DLL without other changes to the DDR design), using an off chip PLL or DLL (either on the memory module or memory controller), using an echo clock instead of a PLL/DLL, using a vernier circuit instead of a PLL/DLL, using the DQS strobe rather than the system clock to coordinate the timing of data transmissions, and using an asynchronous DRAM design." Gilbert report ¶ 60(d) (citing McAlexander report at 31-34). McAlexander discusses the technological feasibility of these alternatives, but does not discuss their costs. McAlexander report at 30-33. McArdle provides cost estimates for some of these features. *See* McArdle report II, at 22-24; McArdle report III, at 21. Again, the Manufacturers have produced some evidence suggesting the existence of a market for clock synchronization technology. While knowledge of the royalty rates covering these alternative technologies would assist in defining the market, it is not absolutely required.

v. Precharge Technology

According to Dr. Gilbert, the precharge technology market consists of the JEDEC-standard auto precharge and alternatives such as using an RAS level trigger, using a separate precharge command, using a "hidden precharge" command, and eliminating the feature. Gilbert report ¶ 60(e) (citing McAlexander report at 35-36). McAlexander suggests that these technology alternatives were available, but does not provide any cost estimates for using them. McAlexander report at 34-35. Dr. McArdle briefly suggests how much some of these features would cost to implement. *See* McArdle report II, at 30; McArdle report III, at 21. On summary judgment, this showing suffices to establish a genuine issue of material fact as to whether a market for precharge technology existed.

vi. Write Latency Technology

The final technology market proposed by Dr. Gilbert consists of write latency technologies. Gilbert report ¶ 60(f). Dr. Gilbert believes that the market is comprised of the JEDEC standard

programmable write latency, as well as a variety of methods for fixing write latency or using an asynchronous DRAM design. *Id.* (citing McAlexander report at 27-28). Again, the only cost estimates for write latency technologies come from Dr. McArdle. *See* McArdle report III, at 21-22. While these estimates again do not include any possible royalties, they could establish that the alternative technologies are economic substitutes for programmable write latency, and hence the court cannot enter summary judgment as to whether there is a market for write latency technology.

vii. Additional Economic Considerations

Economic commentary on the problem of defining technology markets suggests a method for providing a "backstop" or "checksum" to the market definition inquiry. *See* Joshua A. Newberg, *Antitrust for the Economy of Ideas: The Logic of Technology Markets*, 14 Harv. J. L. & Tech. 83 (2000). The demand for licensed intellectual property, i.e., technology, stems from the need to use intellectual property as a "legal" input for making traditional products. *Id.* at 104-05. The demand for an intellectual property license is therefore similar to the demand for other manufacturing inputs or raw materials. *Id.* at 104. For example, the demand for the DRAMs at issue in this case derives from the consumer demand for the electronic devices that use them, hence the demand for DRAMs is referred to as "derived demand." *Id.*; *see, e.g., Hynix Semiconductor, Inc. v. United States*, 474 F. Supp. 2d 1338, 1343 (C.I.T. 2006). Accordingly, the demands for the various technologies at issue in this case are also "derived demands."

Economic analysis suggests that antitrust law should be concerned about derived-demand technology markets where the following characteristics are present: (1) the downstream product's demand is inelastic; (2) the licensing fees are a small portion of the downstream product's cost; and (3) the cost of switching between substitute technologies is high because of sunk costs associated with adopting the technology. *See id.* at 107-08. These characteristics collectively suggest a market where a hypothetical monopolist could more easily extract rents from downstream consumers because (1) the consumers' demand for the downstream product is constant, (2) even a large increase in the price of one of many inputs will result in only a small increase in the price of the final product, and (3) manufacturers of the final product have no choice but to include the monopolized

technology in the final product.[8] The record demonstrates that these factors are all present to varying degrees in this case, which suggests that the Manufacturers may be able to establish the relevant technology markets on this basis at trial.

For the foregoing reasons, the Manufacturers have introduced sufficient evidence to create genuine issues of material fact regarding the existence of the six alleged technology markets. Rambus's arguments that the Manufacturers have no evidence regarding the royalty costs associated with the alleged substitutes is persuasive. Nonetheless, the Guidelines suggest that market definition can be done in the absence of quantifiable royalty rates. Accordingly, Rambus's motion that the antitrust claims be dismissed because the Manufacturers have no evidence of royalty rates must be denied.

II. MONOPOLY POWER

Rambus next moves for summary judgment on the grounds that it lacks sufficient market share in the six relevant technology markets to support a finding that it possesses monopoly power, and that therefore the Manufacturers' Section 2 claims must fail. To support this argument, Rambus points to the market analysis prepared by one of Hynix's experts, Roy Weinstein. Weinstein's report includes a chart of the sales volume of SDRAM, DDR SDRAM, and DDR2 SDRAM. *See* Perry Decl., Ex. A. The chart shows that Rambus has only obtained licenses from 27.5% of the combined SDRAM markets, while 72.5% of SDRAMs sales are unlicensed. *Id.* Rambus argues that because only 27.5% of global SDRAM sales in 2006 were licensed, Rambus cannot have monopoly power in the six technology markets as a matter of law.[9]

An essential element of a Section 2 claim is monopoly power. *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 481 (1992). Monopoly power refers to the "power to control prices

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[8] Prof. Newberg proposed an additional factor, namely that "substitute technologies are either unavailable or not as efficient as the technology comprising the candidate relevant market." Newberg, 14 Harv. J. L. & Tech. at 107. This factor duplicates the process of defining the relevant technology market.

[9] The court notes that the data Rambus relies on demonstrate Rambus's licensed share of various DRAM markets, not necessarily the technology markets the Manufacturers now claim Rambus has monopolized. No one appears to argue, however, that the relevant technologies have any downstream use other than for manufacturing DRAMs.

or exclude competition." *Id.* Monopoly power is most often demonstrated by circumstantial evidence, and is presumed where a defendant controls a dominant market share in a relevant market. *See, e.g., Rebel Oil Co., Inc. v. Atl. Richfield Co.*, 51 F.3d 1421, 1434 (9th Cir. 1995). Yet the Supreme Court has long recognized that market share alone can be misleading, and will consider other evidence to determine whether a company has the power to restrict output and raise prices, i.e., monopoly power. *See, e.g., United States v. General Dynamics Corp.*, 415 U.S. 486 (1974) (considering, in assessing a merger, whether a coal company could raise prices where long-term supply contracts fixed coal prices). "Market share is just a way of estimating market power, which is the ultimate consideration. When there are better ways to estimate market power, the court should use them." *Ball Mem'l Hosp., Inc. v. Mutual Hosp. Ins., Inc.*, 784 F.2d 1325, 1336 (7th Cir. 1986).

Rambus draws the court's attention to the Ninth Circuit's discussion of monopoly power in *Rebel Oil*, and directly to the phrase that "most cases hold that a market share of 30 percent is presumptively insufficient to establish the power to control price." 51 F.3d at 1438. As a preliminary matter, this discussion is limited to proving monopoly power by circumstantial evidence of a relevant market and market share. It has no bearing on proof of monopoly power by evidence of direct competitive harm. Second, it only establishes a presumption against monopoly power that can be rebutted. It does not establish a *per se* rule that immunizes Rambus from antitrust scrutiny in the event Rambus had only 27.5% of each relevant technology market. Nonetheless, the court cannot grant summary judgment for Rambus, even if market share alone were determinative, because Rambus's share of the relevant technology markets is contested. Rambus argues that its share of the technology markets is measured by the share of licensed users of the technologies, which Weinstein suggests is 27.5% of the market in 2006. Mot. at 13. Yet Rambus has accused Micron, Nanya, Hynix, and Samsung of infringing its patents on the technologies at issue. While the Manufacturers vigorously deny that the patents are valid and that they infringe, they comprise another 60.3% share of the various technology markets. Rambus cannot defeat the Manufacturers' antitrust claims because of its limited market share, given that it may win at the patent trial (as it did against Hynix) and establish a dominant share in the relevant technology markets.

Another difficulty with Rambus's market share argument is that it fundamentally overlooks the nature of this antitrust case. This case involves technology markets tied up with standard-setting. The Manufacturers accuse Rambus of monopolizing or attempting to monopolize the markets for six technologies, which in turn are inputs for making JEDEC-compliant SDRAMs. Prior to JEDEC's actions, the alternative technologies in the six markets competed for inclusion in the standard. The purpose of standardization, however, is to pick one technology as a winner, and most likely to confer 100% of the market to that technology.[10] Under a presumption-approach to demonstrating monopoly power, *every* successfully standardized technology would be presumed to have monopoly power over its technology market. Such a presumption could breed ruinous and unmerited litigation. *Cf. Illinois Tool Works, Inc. v. Independent Ink, Inc.*, 547 U.S. 28, 43-45 (2006) (rejecting even a presumption that a patent confers market power). This is especially true given that most standard-setting bodies require some sort of RAND ("reasonable and non-discriminatory") licensing commitment. *See generally* Daniel G. Swanson & William J. Baumol, *Reasonable and Nondiscriminatory (RAND) Royalties, Standards Selection, and Control of Market Power*, 73 Antitrust L. J. 1 (2005). Where such a commitment exists, the patent owner likely has no meaningful ability to raise the licensed technology's price or reduce its output, despite having 100% market share. Hence, it would seem impossible to describe the patent owner in those contexts as having "monopoly power" over the technology market. On the other hand, a patent owner whose patent covers a standard and is not bound by RAND commitments or pre-existing licenses would seem to have market power, i.e., the power to raise price or reduce output. If they obtained this market power through anticompetitive conduct, they may have violated section 2.

Accordingly, the court cannot grant Rambus's motion for summary judgment on monopoly

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[10] Scholarly economic and legal literature on technology, standard-setting, and antitrust is growing. A general background is helpfully provided by Prof. Mark Lemley. *Intellectual Property Rights and Standard-Setting Organizations*, 90 Calif. L. Rev. 1889 (2002). Others have highlighted the risks of overzealous antitrust enforcement. David Teece & Edward Sherry, *Standard Setting and Antitrust*, 87 Minn. L. Rev. 1913 (2003) (Teece is an expert witness for Rambus). The most recent discussion of the topic is forthcoming in the Antitrust Law Journal. *See* Joseph Farrell, John Hayes, Carl Shapiro, and Theresa Sullivan, *Standard Setting, Patents, and Hold-Up*, *available at*: http://faculty.haas.berkeley.edu/shapiro/standards2007.pdf (August 13, 2007) (Farrell, Hayes, and Sullivan have worked for Hynix in relation to this case).

power because there are multiple issues of fact, including the size of Rambus's market share. Even if Rambus's market share could be fixed, the court is doubtful that market share is a meaningful indicator of monopoly power in a standardized technology market.

In the alternative, Rambus moves for summary judgment on the geographic dimension of the Manufacturers' market definitions, arguing that it cannot have worldwide market power because the Manufacturers have introduced no evidence that "Rambus has any issued patents that cover (or are likely to be held to cover) the manufacture and sale of a DRAM that occurs entirely outside the United States." Mot. at 14. The Manufacturers' opposition notes a Rambus press release stating that it possesses U.S. and European patents covering Rambus's inventions. Brewer Decl., Ex. 63. The Manufacturers have also submitted evidence of Rambus's patent applications from India, Taiwan, Israel, Korea, Germany and Europe. *See generally* Brewer Decl., Exs. 45-56. The Manufacturers have also produced evidence that Rambus has sued Micron in the Germany, France, Italy, and the United Kingdom, though so far without success.[11] While the Manufacturers bear the burden of demonstrating a relevant market at trial, Rambus has the burden on summary judgment of demonstrating that there is no genuine issue of material fact. Rambus's argument here is based solely on whether it has issued foreign patents that arguably cover DRAM. To the extent Rambus's motion is based solely on whether it owns any foreign patents, the Manufacturers have produced enough evidence to raise a genuine issue of material fact as to Rambus's foreign patent rights.

To be clear, the relevant technology market may not be worldwide. As a technology market consists of "intellectual property that is licensed," the territoriality of patent rights may preclude defining a technology market broader than one country. Indeed, the Manufacturers' expert, Dr. Gilbert, appears have some doubt as to whether there is a worldwide market. *See* Gilbert report, ¶¶ 64, 65 (stating that the market is "at least the United States, and could be worldwide"). However,

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[11] At oral argument, the Manufacturers suggested that Rambus has worldwide market power because it requires licensees to pay royalties on DRAM sales everywhere in the world. Mr. Barza also argued that Rambus has global market power because "if you cannot get into the U.S., then you're pretty much out of the market[.]" While the arguments are probative as to global market power, the court has not been able to find any evidence in the record to support them, nor do the Manufacturers raise them in their opposition.

questions of fact exist, and, accordingly, the court cannot enter summary judgment on the geographic scope of the relevant technology markets.

III. DR. GILBERT'S EXPERT TESTIMONY

Rambus moves under Rule 702 of the Federal Rules of Evidence to exclude various portions of Dr. Gilbert's testimony. In general, expert testimony must be helpful to the trier of fact and the expert must be qualified.[12] FRE 702. If an expert is qualified and the expert's testimony would be helpful, Rule 702 imposes three conditions to ensure that the expert's testimony is reliable. First, the testimony must be based upon sufficient facts and data. *Id.* Second, the testimony must be the product of reliable principles and methods. *Id.* Third, the expert must have reliably applied those principles to the facts of the case. *Id.* Rambus argues that various aspects of Dr. Gilbert's testimony fail to satisfy these criteria.

A. Market Definition

Dr. Gilbert's report on market definition begins by citing the FTC and DOJ IP GUIDELINES discussed above, which Dr. Gilbert helped to write. Gilbert report ¶¶ 4, 60 & fn. 113. Rambus argues that while Dr. Gilbert selected the reliable method for defining a market, he did not reliably apply that method to the facts and data of this case, and that he should therefore be barred from presenting his opinion regarding market definition.[13]

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[12] Rambus's *Daubert* motion does not attack Dr. Gilbert's qualifications as an economist.

[13] Establishing market definition in this case likely requires expert testimony. The Ninth Circuit has referred to market definition as a "highly technical economic question." *Morgan, Strand, Wheeler & Biggs v. Radiology, Ltd.*, 924 F.2d 1484, 1490 (9th Cir. 1991). Other courts have suggested that, "[f]ailure to adduce expert testimony on competitive issues such as market definition augurs strongly in favor of granting summary judgment against an antitrust plaintiff." *Drs. Steuer and Latham, P.A. v. National Medical Enterprises, Inc.*, 672 F. Supp. 1489, 1512 n. 25 (D.S.C. 1987), *aff'd mem*, 846 F.2d 70 (4th Cir. 1988). The Eleventh Circuit has gone farther and held that "[c]onstruction of the relevant market and a showing of monopoly power must be based on expert testimony." *Bailey v. Allgas, Inc.*, 284 F.3d 1237, 1246 (11th Cir. 2002). While some courts have permitted plaintiffs to establish market definitions without expert testimony, *see, e.g., General Industries Corp. v. Hartz Mountain Corp.*, 810 F.2d 795, 806 (1987), that is likely not appropriate in this case because while a technology market is, in the end, just another product market, its contours are difficult to define, as the DOJ and FTC have recognized. *See* IP GUIDELINES § 3.2.2 (noting the agencies will delineate technology markets "if the data permit"). Given the complexity of the task, a jury likely cannot conclude that two technologies are "close substitutes" and hence comprise a relevant technology market without expert testimony.

By relying on the McAlexander report, Dr. Gilbert's report lays out why he believes the various alternative technologies would be viewed as technological substitutes. It is less clear that Dr. Gilbert adequately considered whether consumers would view the alternative technologies as close economic substitutes, especially given the report's failure to cite to Dr. McArdle in his discussion. *See Unitherm*, 375 F.3d at 1363. Rambus also correctly points out that Dr. Gilbert's report does not mention using a "small but significant and non-transitory" price increase to determine if the technologies are close economic substitutes such that they constitute a relevant market. In *Unitherm*, the Federal Circuit held that an expert's testimony could not support a finding of a market definition as a matter of law because the expert failed to address the ability of consumers to substitute as an economic matter. *Id.* In that case, the expert had defined the technology market as a single patented process because no other process had the same elements as the patented process. *Id.* The court explained that while nothing would be a perfect substitute as a technological matter, the expert failed to provide evidence of what consumers would do as an economic matter. *Id.*

A court does not have to admit "opinion evidence that is connected to existing data only by the *ipse dixit* of the expert." *General Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997). "A court *may* conclude that there is simply too great an analytical gap between the data and the opinion proffered." *Id.* (emphasis added). Rambus's dissection of Gilbert's report suggests that there may be some gaps in his reasoning that the various technologies are close economic substitutes and hence comprise relevant technology markets. On the other hand, Dr. Gilbert's market definition appears more substantial than the excluded expert's analysis in *Unitherm*. Given the complexity and significance of this issue, the court does not believe these gaps are "simply too great" to prevent Dr. Gilbert from testifying to market definition. Dr. Gilbert may testify to his conclusion (a), specifically that

> A reasonable relevant market definition for purposes of assessing Rambus's challenged conduct consists of six relevant technology markets corresponding to the six Rambus technologies, and the set of technologies that were close substitutes for each, for use in high-speed DRAMs. The geographic scope of the relevant markets is the United States. If it were demonstrated that viable alternative interface technologies were sufficiently close substitutes to constrain Rambus's pricing of the individual technologies at issue, a reasonable market definition would also include those alternative DRAM interface technologies.

Gilbert report ¶ 13(a).

B. Acquisition of Monopoly Power

Rambus next attacks two conclusions Dr. Gilbert makes in his report regarding monopoly power. The first conclusion Rambus argues should not be heard by the jury is that "Rambus's market power in each of the six relevant markets would have been disciplined by viable alternative technologies." Gilbert report, ¶ 13(b). Rambus argues that the conclusion "turns entirely" on Dr. Gilbert's assumption that various alternative technologies were viable, which he concedes he assumed based on the Manufacturers' other expert reports. Rambus then argues that if these assumptions are undercut and there were no viable alternatives, then the conclusion on pre-standardization market power would not follow. Rambus concludes that because Dr. Gilbert's opinion rests on assumptions about alternative technologies, he should not be allowed to testify because he has made no independent analysis and because the conclusion is beyond his expertise.

Dr. Gilbert does not offer an opinion on the viability of alternative technologies (which would be beyond his expertise). He testifies to the effect alternative technologies would have had on Rambus's ability to wield market power. This conclusion is within his economic expertise. Similarly, it is irrelevant that Dr. Gilbert has not independently analyzed whether the alternative technologies were viable. He may properly rely on the Manufacturers' engineering experts for those conclusions. *See* FRE 703. His independent analysis consists of the effect the alternative technologies have on the market. Rambus correctly points out that *if* those assumptions turn out to be false, Dr. Gilbert's testimony will likely be baseless. But such an argument goes to the weight of Dr. Gilbert's testimony, not its validity, and should be evaluated based upon the foundational facts presented at trial.

Dr. Gilbert's second conclusion is that "in early 2000, . . . the competitive viability of the technological alternatives to the Rambus technologies was significantly weakened." Gilbert report, ¶ 13(c). Rambus repeats that this conclusion turns on the assumption that technological alternatives were viable. Again, this argument attacks one of Dr. Gilbert's conclusions because some of his assumed facts may not be true. This does not mean that Dr. Gilbert must be prevented from testifying under Rule 702; it simply means that if the jury concludes that Dr. Gilbert's assumed facts

are wrong, then his conclusion should be rejected.

C. Switching Costs

Rambus's motion next argues that Dr. Gilbert's conclusions on switching costs must be excluded because he lacks sufficient expertise and has not performed an independent analysis of switching costs. Dr. Gilbert's conclusions in short are that the cost of switching away from the SDRAM standards enhanced Rambus's market power. *See* Gilbert report ¶ 13(c)-(e). Dr. Gilbert's conclusions contain estimates of the switching costs the Manufacturers faced, yet Dr. Gilbert concedes that he cannot estimate those switching costs. *Id.* at ¶ 86. Rambus argues that therefore Dr. Gilbert should not be allowed to testify to his conclusions based on switching costs. Rambus's argument seeks too much. Dr. Gilbert is qualified, has done the analysis, and made conclusions about the effects of switching costs on market power. He may testify that "switching costs provide a measure of enhancement to Rambus's market power that resulted from JEDEC's decision to incorporate the Rambus technologies into the JEDEC DRAM standards." *Id.* at ¶ 13(d).

Rambus's argument does have merit, however, if Dr. Gilbert intends to testify to that a "reasonable estimate of switching costs totals billions of dollars" or any specific dollar amount for switching costs. *Id.* at ¶ 13(d). Rambus may believe that the Manufacturers intend to have Dr. Gilbert do so because Dr. Gilbert's "Summary of Conclusions" refers to "billions of dollars." This estimate is not based on Dr. Gilbert's own research but on Dr. McArdle's analysis. *See id.* ¶¶ 87-89. Were Dr. Gilbert to attempt to testify to the amount of switching costs, it would be clearly improper given that he concedes that "it is beyond my training and expertise to reach my own independent conclusions regarding the specific costs that DRAM suppliers and other industry participants would incur in conjunction with a switch to an interface technology that avoided Rambus's claimed patent rights." *Id.* ¶ at 86. As with the technological viability of alternatives, it is beyond Dr. Gilbert's expertise to testify to the amount of switching costs. Dr. Gilbert may, however, rely on other evidence and testimony to draw conclusions about the economic effect of those costs.

D. Monopoly Power

Rambus next argues that Dr. Gilbert's conclusions that "Rambus has achieved a monopoly

position in the relevant markets" and that "Rambus's monopoly position is durable" must be kept out because these conclusions are based on "assumptions rather than expert economic analysis." Mot. *In Limine* No. 1 at 9-10. Rambus also reiterates its argument that the Manufacturers (and Dr. Gilbert) cannot argue that Rambus has power without conceding that Rambus's patents are valid and infringed. The court has previously observed, and the Manufactures acknowledge, that Dr. Gilbert's opinion will be predicated on the infringement and validity of Rambus patents. If it is later determined that Rambus's patents are not infringed or are invalid, any verdict in favor of the Manufacturers on their antitrust claims will have to be set aside. Rambus, of course, has consistently and strenuously argued that its patents are valid and infringed. The "assumptions" argument is based on the truth of the Manufacturers' allegations regarding relevant markets and switching costs. These positions of course may be discredited at trial. That is not, however, a basis for excluding Dr. Gilbert at this stage. If Rambus's argument were the law, no expert could testify to any conclusion that did not rest on factual stipulations by the parties.

E. Anticompetitive Conduct

Rambus's Motion *In Limine* No. 1 has merit with respect to its challenge to Dr. Gilbert's conclusions on anticompetitive conduct. Dr. Gilbert opines that:

> In my opinion, Rambus's conduct should be deemed anticompetitive because Rambus manipulated the expectations of JEDEC members and distorted the standard setting process. My conclusion stands irrespective of whether Rambus violated a specific JEDEC rule regarding disclosure. The relevant issue is whether Rambus acquired heightened market power from conduct other than competition on the merits.

Gilbert report, ¶ 13(f). Dr. Gilbert concedes he has no "special expertise to address whether Rambus's conduct violated JEDEC's written rules." *Id.* ¶ 38. He also disclaims any expertise to determine "the intent of Rambus and other participants in JEDEC" and "the appropriate legal standard for evaluating Rambus's conduct in JEDEC." *Id.* ¶ 9. Dr. Gilbert "assume[s] for the purpose of [his] analysis that during the time Rambus was a member of JEDEC and thereafter, Rambus undertook a course of conduct that deceived and misled JEDEC member companies." *Id.* ¶ 48. Dr. Gilbert's report then summarizes the conduct he assumed occurred. *Id.* ¶¶ 49-59.

Against this background of disclaimers and assumptions, Dr. Gilbert's proposed testimony

and conclusion as to anticompetitive conduct are beyond his area of expertise and without foundation. As Rambus correctly points out, Dr. Gilbert's report merely attaches the label "anticompetitive" to the Manufacturers' pleadings. He has conducted no economic analysis to explain why any assumed conduct should be deemed "anticompetitive." Putting aside whether the testimony has any reliable basis, his testimony in this regard is simply not helpful to the trier of fact, and therefore cannot be admitted. Even if Dr. Gilbert's opinion testimony regarding anticompetitive conduct could be admitted under Rule 702, its prejudicial effect greatly outweighs any purported relevance and is subject to exclusion under Rule 403. *See, e.g., United States v. Dukagjini*, 326 F.3d 45, 54-56 (2d Cir. 2002) (discussing the impropriety of allowing an expert witness to make "sweeping conclusions," summarize the case, or stray from their expertise in the case of a drug prosecution). Accordingly, Dr. Gilbert may not testify regarding Rambus's conduct at JEDEC. Dr. Gilbert may not testify regarding whether such conduct is "anticompetitive." Dr. Gilbert's opinion set forth in paragraph 13(f) of his summary of conclusions may not be presented to the jury.

F. Causation

Rambus's final challenge to the conclusions of Dr. Gilbert's report focuses on causation, specifically Dr. Gilbert's conclusion that "Rambus's alleged course of conduct resulted in its ability profitably to charge royalty rates in excess of the rate, if any, that it would have been able to charge in the absence of its disputed behavior." Gilbert report ¶ 13(h). Dr. Gilbert discusses causation in part VIII of his report. *See id.* ¶¶ 124-137. While part VIII is rich in assumed facts, it lacks any expert analysis of why those assumed facts lead to a finding of causation. Dr. Gilbert's expertise adds nothing to the facts the Manufacturers hope to prove that would be helpful to the jury. Nor does Dr. Gilbert explain the "reliable methods" he applied to decide that Rambus's conduct caused its increase in market power.

The Manufacturers argue that Dr. Gilbert's report "appl[ies] economic analysis," and highlight Dr. Gilbert's discussion of reasonable royalty rates in paragraph 135 of his report. Opp. to Mot. *In Limine* No. 1 at 16. Dr. Gilbert's recitation of an inequality does not convert a paragraph of advocacy into "economic analysis." Paragraph 135 begins with a swipe at Rambus's legal arguments

in prior cases, then discusses how Dr. Gilbert defines the amount of a RAND royalty. It is not entirely clear how the paragraph relates to Dr. Gilbert's opinion on causation, and the Manufacturers' reliance on it as particularly illustrative of Dr. Gilbert's expert reasoning seems misplaced.

At trial, the jury will be able to determine on the basis of the evidence of Rambus's conduct and the expert testimony regarding market definition and monopoly power whether Rambus's conduct caused its alleged acquisition of monopoly power. The jury does not need Dr. Gilbert's personal opinion on the question to help them. *See, e.g., Rottlund Co. v. Pinnacle Corp.*, 452 F.3d 726, 732 (8th Cir. 2006) (reversing district court's allowance of expert testimony on whether the defendant independently created a work of authorship because jury did not need expert help on that issue).

G. "Vouching"

Having challenged each of Dr. Gilbert's report's conclusions, Rambus next focuses its ire on Dr. Gilbert's allegedly improper "vouching" for the quality of other experts' testimony. In particular, Rambus points to long stretches of Dr. Gilbert's report wherein he summarizes the findings of the other Manufacturers' expert witnesses. *See, e.g.*, Gilbert report ¶¶ 83-121. Particularly troublesome paragraphs include phrases like "[i]n my view, the foregoing testimony is consistent with Dr. McArdle's overarching conclusion [regarding switching costs]." *Id.* ¶ 95. The Manufacturers argue that Dr. Gilbert is not improperly vouching, but explaining the factual basis and underlying assumptions of his later analysis.

Dr. Gilbert is allowed to explain the basis for his opinions. For example, Dr. Gilbert can explain that he relied on Dr. McArdle's conclusions about the existence of switching costs and McAlexander's analysis of technological alternatives. As the Manufacturers point out, this is "absolutely necessary" for the jury to decide whether to accept or reject Dr. Gilbert's analysis. Dr. Gilbert will not, however, be permitted to spruce up the Manufacturers' other experts' testimony at trial by vouching for its consistency or accuracy. Such testimony would invade the province of the jury, and it is also far afield from Dr. Gilbert's expertise given his professed lack of knowledge in the subject areas covered by the other experts.

Paragraph 95 of Dr. Gilbert's report is an illustrative example of how Dr. Gilbert vouches for the testimony of other experts. Paragraph 95 follows a lengthy recitation of evidence elicited at the FTC trial, which Dr. Gilbert then explains is "consistent" with Dr. McArdle's analysis. Dr. Gilbert may explain that his opinions on monopoly power rest on the switching costs faced by the DRAM industry, and he may cite to evidence in the record for testimony supporting a "lock-in." However, he may not state that the testimony of one witness reinforces the testimony of another. As Dr. Gilbert has conceded, he has no expertise to enable him to calculate switching costs. *See id.* at ¶ 86. Assertions that the testimony of one witness supports that of another is a proper subject of argument but not a subject of expert testimony.

H. Additional Opinions

Rambus concludes by moving the court to exclude Dr. Gilbert's opinions on two issues: whether JEDEC members should have known Rambus had relevant intellectual property and whether JEDEC minutes were confidential. Rambus argues that Dr. Gilbert has no relevant expertise (being an economist) to opine on these two subjects.

As a preliminary matter, it is not clear that the Manufacturers oppose Rambus's motion on these points. *See* Opp. to Mot. *in limine* at 17-18. The Manufacturers appear to argue that Dr. Gilbert is not offering opinions on these subjects, but that he has made assumptions regarding those two issues that inform his expert opinions. Dr. Gilbert's report (sections IX.A and IX.C, ¶¶138-150) recites some assumed facts and argument but contains no analysis. Putting that aside, these two issues are questions of fact on which an economic expert's opinion is not helpful. Accordingly, Dr. Gilbert may not testify as to his opinion on these two additional issues because they are beyond his expertise and his opinions are not helpful. To the extent that these issues inform his expert opinions, Dr. Gilbert may, however, explain that he assumed that JEDEC members should not have known about Rambus's IP and that he assumed that JEDEC minutes were confidential but he cannot comment on the accuracy of the assumptions.

IV. ORDER

For the foregoing reasons, the court denies Rambus's Motion for Summary Judgment No. 1

on Monopolization. The court grants in part and denies in part Rambus's *Daubert* Motion No. 1:

1. Dr. Gilbert may testify as to his opinions set forth in his Summary of Conclusions paragraphs 13(a), (b), (c) and (d) (to the extent of assuming that there were switching costs and, if so, that those costs enhanced Rambus's market power) and (e);

2. Dr. Gilbert may not testify to his conclusions in paragraph 13(d) that switching costs would total "billions of dollars" or any other specific dollar amount, or to any conclusions in paragraph 13(f), 13(g) and 13(h); and

3. Dr. Gilbert may not express an opinion on whether JEDEC members should have known that Rambus had relevant intellectual property and whether JEDEC minutes were confidential (but he can assume those alleged facts as part of the bases for his opinions).

DATED: 1/5/08

Ronald M. Whyte

RONALD M. WHYTE
United States District Judge

United States District Court
For the Northern District of California

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